Aromatic Plants Cultivation, Processing and Uses

Author: H. Panda
Format: Paperback
ISBN: 8178330571
Code: NI120
Pages: 504
Price: Rs. 975.00 **US$** 100.00
Publisher: Asia Pacific Business Press Inc.
Usually ships within **3** days

Aromatic plants have essential or aromatic oils naturally occurring in them. They help heal mental ailments and other diseases. India is endowed with a rich wealth of medicinal plants. Aromatic (Aroma Producing) plants are those plants which produce a certain type of aroma. Their aroma is due to the presence of some kind of essential oil with chemical constituents that contain at least one benzene ring in the their chemical configuration. The chemical nature of these aromatic substances may be due to a variety of complex chemical compounds. These plants have made a good contribution to the development of ancient Indian material medica. In recent years, there has been a tremendous growth of interest in plant based drugs, pharmaceuticals, perfumery products, cosmetics and aroma compounds used in food flavors and fragrances and natural colors in the world. There is a definite trend to adopt plant based products due to the cumulative derogatory effects resulting from the use of antibiotic and synthetics and except for a few cultivated crops, the availability of plant based material is mainly from the natural sources like forests and wastelands. There is a need to introduce these crops into the cropping system of the county, which, besides meeting the demands of the industry, will also help to maintain the standards on quality, potency and chemical composition. During the past decade, demand for aromatic plants and its products has attracted the worldwide interest, India being the treasure house of biodiversity, accounts for thousands of species which are used in herbal drugs. 90% of herbal industry requirement of raw material is taken out from the forests.

Some fundamentals of this book are botanical description of the plant, genetic improvement , harvesting, intercropping, transplantation, irrigation and weeding, vanilla cultivation in india, commercial cultivation of vanilla, distillation of herbage for essential oil, effect of growth hormones, jasmine crop improvement & agrotechniques, efforts for new vatiety of jasminum auriculatum , essential oils of agarwood, cinnamomum tamala leaves, eucalyptus citriodora and caultheria pragrantissima, past and future of sandal wood oil industry, by product development from turmeric and ginger rhizomes, isolation of essential oils and its flavour profile etc.

This book contains most of the important aspects related to aromatic plants. It is being published for those who are interested in growing, processing and trading of aromatic plants.

Tags

Aromatic plants cultivation India, Cultivation of aromatic plants, Aromatic plants farming, Cultivation of aromatic crops, List of aromatic plants in India, Names of aromatic plants, Aromatic plants, Processing of Aromatic Plants, Extraction of essential oils from aromatic plants, Extraction of essential oils by steam distillation, Essential oil extraction methods, How Are Essential Oils Extracted?, Essential oils, Extraction of Volatile Oil from Aromatic Plants, Steam distillation procedure, How to extract plant oils by distillation?, How to extract oil from plants?, List of aromatic plants and their uses, List of Important Aromatic Plants, Multiple

Contents

4. Cultivation of Coriander Sativum
Description of the Plant
Cultivation
Soil and Climate
Propagation
Irrigation
Harvesting
Pests and Diseases
Distillation
Yield
Chemical Constituents
Uses
Economics of Cultivation

5. Cultivation of Lavender Species
Botany
Soil and Climate
Cultivation
Propagation
Propagation By Seeds
Transplantation
Fertilizer Application
Weeding
Regeneration
Harvesting
Distillation
Oil Content and Oil Yield
Chemical Constituents
Uses
Economics of Cultivation

6. Cultivation of Matricaria Chamomilla
Description of the Plant
Genetics
Cultivation
Soil and climate
Propagation/nursery
Transplantation, irrigation and weeding
Cropping sequence
Pests and diseases
Manures and fertilizers
Harvesting
Collection of seeds
Yield
Drying and storage
Distilation
Yield and characteristics of the oil
Uses
Specification of the drug
Economics of cultivation

7. Vanilla World s second most expensive spice

Vanilla Flower
Vanilla Beans
Vanilla cultivation in India
Commercial Cultivation of Vanilla
Vanilla Extract and Flavourings
Commercial uses of Vanilla
Market for Vanilla
Exports grades and standards

8. Cultivation of Artemisia Annua
Description of the plant
Soil and climate
Propagation
Weed control
Fertilizers and manures
Irrigation
Harvesting
Chemistry and uses
Distillation
Economics of cultivation

9. Cultivation of Mentha Arvensis
Plant descriptors
Available cultivars of menthol mint
Choice of place for cultivation
Land preparation
Preparation of planting material
Production of suckers
Production of seedlings
Planting of suckers in the field
Fertilizer application
Irrigation and drainage
Interculture and weed control
Crop rotation
Intercropping
Harvesting
Yield
Storage of herbage
Pests and diseases
Insect pests
Diseases
Distillation of herbage for essential oil
Directly fired distillation tank
Design availability
Use of mint oil and its derivatives
Economics of cultivation

10. Cultivation of French Basil (Ocimum Bacilicum L.)
1. European Type
2. Reunion Type
3. Methyl Cinnamate Type
4. Eugenol Type

Botany
Soil and Climate
Field preparation
Propagation
(a) Raising of Nursery
(b) Planting
Irrigation
Fertiliser Application
Interculture
Harvesting and Yield
Agronomical Studies
Physiological Studies
Heavy metal tolerance
Effect of growth hormones
Mineral contents
Seed mucilage studies
Effect of photoperiodism
Biosynthesis of Eugenol
Tissue Culture Studies
Genetical Studies
Chemical Composition
Uses
Cosmetic
Food
Folk medicine
Ayurvedic Properties

11. Jasmine Crop improvement & agrotechniques
New varieties of jasmine
Arka Surabhi
Arka Arpan
Efforts for new vatiety of Jasminum auriculatum
for extraction of essential oil
Constituent of Jasmine essential oil
Agronomy
Plant protection
Water saving, labour saving low cost device for
propagation of plant cuttings
Details of the device
Required materials for the device
Detailed method
Economic viability of growing jasmine for essential oil

12. Semecarpus Anacardium L.f.
Introduction
Chemistry of Nuts

13. Himalayan Cedarwood Oil
Essential oil of Deodar (Cedrus Deodara)
Essential oil of Juniperus Recurva var. Squamata and
other oils of Juniperus spp.
Agarwood and Oil Agarwood
Uses

14. Essential oils of Agarwood, Cinnamomum Tamala Leaves,
Eucalyptus Citriodora and Caultheria Pragrantissima
Distillation
Gaultheria
Eucalyptus

15. Past and Future of Sandal wood Oil Industry
Plantation and Harvesting
Disease Control
Distillation of Oil
Packing
Problems and their Solutions
Adulteration
Future Prospects
Kewda Industry in Orissa

16. Production Technology and Package of Practices in Chilli
Cultivated Species of Capsicum
Constraints in Chilli Production
Technologies Developed
Disease and Disease Management
Marketing in Chilli
Value Addition in Chilli

17. By Product Development from Turmeric and Ginger Rhizomes
Introduction
By Product Development in Turmeric
Curcumin
Turmeric Essential Oils
Isolation of Essential Oils and its Flavour Profile
By product Development in Ginger
Survey of Raw Material
Essential oils
Oleoresin
Gingerol in Ginger Oleoresin
Starch
Protein
Crude Fibre
Commercial Extraction of Ginger Oleoresin
Process Description for Oleoresins
Oleoresin Quality
Flavour Quality of Ginger Oleoresins
Essential Oils of Ginger
Profile of Flavour in Ginger Cultivars

18. Synthesis of 4 Acye 3, 7,7 Trimethylbicyclo [4, 1, 0]
Hept 3 ene and Related Compounds by Friedel Crafts
Reaction on (+) ~ Car 3 ene
Results and Discussions
1. Synthesis of 4 acetyl 3, 7, 7 trimethylbicyclo [4, 1, 0]
hept 3 ene and its position isomers (II).
2. Synthesis of 4 propionyl 3, 7, 7 trimethylbicyclo [4, 1, 7]

hept 3 ene and its position isomers (III).
3. Synthesis of 4 Butyryl 3, 7,
7 trimethylbicyclo [4, 1, 0] hept 3 ene and its
position isomers (IV).
Experimental
Fractionation of Turpentine Oil for Isolation
of 3, 7, 7 Trimethylbicyclo [4, 1, 0] hept 3 ene
((+) Car 3 ene (I)).
4 Acetyl 3, 7, 7 trimethylbicyclo [4, 1, 0]
hept 3 ene and its position isomers (II).
Separation of IIa, and IIc by Column Chromatography.
4 Acetyl 3, 7, 7 trimethylbicyclo [4, 1, 0] hept 2 ene (IIb)
3 Methylene 4 acetyl 7, 7 dimethylbicyclo
[4, 1, 0] heptane (IIc)
4 Propionyl 3, 7, 7 trimethylbicyclo [4,1,0]
hept 3 ene and position isomers (III).
Separation of IIIa, IIIb and IIIc by column Chromatography.
4 Propionyl 3, 7, 7 trimethylbicyclo [4, 1, 0]
hept 3 ene (IIIa).
4 Propionyl 3, 7, 7 trimethylbicyclo [4, 1, 0]
hept 2 ene (IIIb).
3 Methylene 4 propionyl 7, 7 dimethylbicyclo [4, 1, 0]
heptane (IIIc).
4 Butyryl 3, 7, 7 trimethylbicyclo [4, 1, 0]
hept 3 ene and its position isomers (IV).
Sederation of IVa, IVb and IVc by column chromatography.
4 Butyryl 3, 7, 7 trimethylbicyclo [4, 1, 0] hept 3 ene (IVa).
4 Butyryl 3, 7, 7 trimethylbicyclo [4, 1, 0] hept 2 ene (IVb).
3 Methylene 4 Butyryl 7, 7 dimethylbicyclo [4, 1, 0]
heptane (IVc).

19. Free and Glycosidically bound
volatiles of Clove (Eugenia caryophyllata)
Experimental Procedures
Capillary Gas Chromatographic Analysis
Results

20. Cultivation of Spices
Black Pepper
Climate
Soil
Varieties
Production of Rooted Cuttings
Cultural Practices
Standards
Planting
Under Planting
Soil Fertility and Nutrient Management
Irrigation
Bush Pepper
Diseases
Pests
Harvesting

Cardamom
Mainfield Planting
Varieties
Propagation
Diseases
Pests
Cloves
Climate and Soil
Varieties
Planting Material
Planting
Manuring
Diseases
Pests
Nutmeg
Cultural Practices
Manuring
Pests
Cinnamon
Cultural Practices
Diseases
Manuring and Processing
Diseases
Pests

Ginger
Varieties
Cultural Practices
Diseases
Pests
Turmeric
Varieties
Cultural Practices
Diseases
Pests
21. Bunium persicum (Boiss.) Fedtsch Botany, Conservation Strategies and Cultivation
Botanical Description of Plant
Climate and Distribution
Reasons and Remedies for Dwindling Population of B. persicum in Nature
Phenotypic Variability
Climate
Soil Type
Preparation of Land
Plantation`
(i) Plantation Through Seeds
(ii) Plantation Through Tuberous Roots
Spacing
Method of Plantation
Manuring
Weeding
Irrigation

Harvesting
Intercropping
Pests and Diseases of Kala Zira Crop
Experimental Studies for the Propagation of
Planting Material Under Laboratory Conditions
Regeneration Through Tissue Culture
Economics of the Crop
Conclusion

22. Essential Oils of Artemisia species in Kashmir Himalaya
Artemisia moorcroftiana Wall
Artemisia laciniata Wild
Artemisia salsoloides Will
Artemisia persica Boiss
Artemisia vestita Wall
Conclusion

23. Cultivation and Utilization of Kaempferia galanga L.
Botany
Crop Improvement
Crop Management
Extraction of Essential Oil
Physico chemical Properties of Oil
Utilisation

24. Cultivation and Improvement of Sweet Marjoram
Floristics and Crop Improvement
(i) Floristics
(ii) Studies on Floral Biology
(iii) Crop Improvement
Crop Production and Management.
(a) Soil and Climate
(b) Propagation
(c) Studies on Nutrient and Spacing
(d) Use of Growth Regulators
(e) Crop Rotation/Sequencing and Inter crops
(f) Irrigation and Inter culture
(g) Insect Pests and Diseases
(h) Harvesting, Production of Essential Oil and Yield
(i) Chemistry of Oil

25. Cultivation of Davana for Essential Oil
Introduction
Botany
Floral biology
Climate
Soil
Nursery raising
Transplanting
Manures and fertilizers
Irrigation
Interculture
Growth regulator application

Plant protection
Insect pests
Diseases
Harvesting
Distillation
Yield and Oil content
Chemical Constituents
Physico chemical characteristics of davana

26. Essential Oil of Hyptis Suaveolens Poit
Antimicrobial Efficacy of the Essential Oil of H. suaveolens
(ii) Phytotoxic Behaviour of the Oil
(iii) Chemical Constituents of the Oil
Conclusions

27. Tagetes minuta (Wild Marigold)
An Economic Crop for Hilly Regions
Introduction
Crop Management
Harvesting and Distillation
Quality Evaluation
Uses of Tagetes Oil
Research Needs

28. Present Status of Jamrosa A Review
Cultivation
Areas Under Cultivation and Marketing Prospects

29. Cultural Practices of CKP 25
(Lemongrass) under Irrigated conditions
Introduction
Effect of Date of Plantings
Effect of Different Spacing Combinations
Effect of Nitrogen Levels
Recommendations

30. Development of New Cultivars of Cymbopogons as
Source of Terpene Chemicals

31. Indian Cymbopogons Botany, Agrotechnology,
Utilization, Constraints and Future Scope
Botany
Morphology
Taxonomic Position
Distribution
Cytological Studies
*Chromosome Number
*Cytogenetics
*Reproduction
Agrotechnology
Age of Plantation
Manures and Fertilizers
Irrigation

Weed Control
Harvesting
Genetic Improvement
Utilization
Essential Oils
Major Research and Development Constraints
Conclusion and Scope for Future Work
32. Growth and Performance of Cymbopogon citratus Stapf., the West Indian Lemongrass and Cymbopogon pendulus (Nees ex Steud.) Wats., the Jammu Lemongrass in West Bengal)
Result and Discussion
Intraspecific Variation:
InterspecificVariation:

33. Indian Turpentine Oil as a Raw Material for Terpene Chemicals
Production of Oil of Turpentine
Utilization of Oil of Turpentine
Constituents of Oil of Turpentine and their Derivatives

34.Cultivation of Musk Mallow in Jammu
Introduction

35. Morpho Economic Features of Burma Citronella (Cymbopogon winterianus Jowitt)
Introduction
Discussion

36. Oxidation of Y Terpinene and Isolongifolene with t Butyl chromate
Oxidation of terpinene (I)
Oxidation of isolongifolene (VI)

37. Scope for Commercial Cultivation of Aromatic Plants in Upper Pulney Hills

About NIIR

NIIR PROJECT CONSULTANCY SERVICES (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Start-up Ideas, Business Ideas for Entrepreneurs, Start up Business Opportunities, entrepreneurship projects, Successful Business Plan, Industry Trends, Market Research, Manufacturing Process, Machinery, Raw Materials, project report, Cost and Revenue, Pre-feasibility study for Profitable Manufacturing Business, Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Business Opportunities, Investment Opportunities for Most Profitable Business in India, Manufacturing Business Ideas, Preparation of Project Profile, Pre-Investment and Pre-Feasibility Study, Market Research Study, Preparation of Techno-Economic Feasibility Report, Identification and Section of Plant, Process, Equipment, General Guidance, Startup Help, Technical and Commercial Counseling for setting up new industrial project and Most Profitable Small Scale Business.

NPCS also publishes varies process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.

NIIR PROJECT CONSULTANCY SERVICES , 106-E, Kamla Nagar, New Delhi-110007, India. **Email**: npcs.india@gmail.com **Website**: NIIR.org

Fri, 19 Jan 2018 05:29:27 +0530